IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method of producing a cladding tube for nuclear fuel for a nuclear boiling water reactor, which method comprises the following steps:

forming a tube ~~which comprises~~ comprising:

an outer cylindrical component comprising a first composition mainly containing zirconium; and

an inner cylindrical component metallurgically bonded to the outer component, wherein ~~also~~ the inner component comprises a second composition comprising ~~mainly contains zirconium,~~ 0.1 to 0.4 percentage by weight Sn, 400 to 1500 ppm Fe, less than 600 ppm O and the rest Zr, except for impurities of a content that does not exceed that which is normally accepted in Zr or Zr-alloys for applications in nuclear reactors,

wherein the first and second compositions materially ~~material compositions of the inner component and the outer component are selected such that they~~ differ from each other, and wherein the second composition ~~such that the inner component~~ has a lower recrystallization temperature than the first composition ~~outer component~~; and

~~after that the cladding tube has been formed~~ finally annealing the cladding tube at a temperature and ~~for~~ a time that results in ~~such that~~ a first degree of recrystallization of the outer component and a second degree of recrystallization of the inner component, wherein the second degree is at least 97 percent and wherein the first degree is less than the first degree and ~~recrystallation of the inner component substantially completely recrystallizes and such that the outer component partly recrystallizes but to~~

~~a lower extent than the inner component, wherein said final annealing is carried out such that the degree of recrystallization in the outer component is~~ higher than 50 %.

2. (Canceled)

3. (Currently Amended) A method according to claim 1, wherein ~~said final annealing is carried out such that~~ the second degree of recrystallization ~~in the inner component~~ is ~~substantially~~ 100 % and the first degree of recrystallization ~~in the outer component~~ is between 50 % and 96%.

4. (Currently Amended) A method according to claim 1, wherein the second composition comprises ~~inner component does not contain more than~~ 1500 ppm Fe or less.

5. (Currently Amended) A method according to claim 1, wherein the second composition comprises ~~inner component does not contain more than~~ 1000 ppm O or less.

6. (Currently Amended) A method according to claim 1, wherein the first ~~outer component has a~~ composition ~~substantially comprising~~ comprises Zircaloy 2 or Zircaloy 4.

7. (Canceled)

8. (Canceled)

9. (Previously Presented) A method according to claim 1, wherein the inner component has a thickness such that it constitutes between 3% and 30% of the total thickness of the cladding tube.

10. (Currently Amended) A method according to claim 1, wherein the ~~final~~ step of finally annealing is carried out at a temperature of between 485°C and 550°C.

11. (Currently Amended) A method according to claim 1, wherein the ~~final~~ step of finally annealing is performed for ~~carried out during~~ l h to 6h.

12. (Currently Amended) [[A]] The method of claim 1, further ~~using of a cladding tube, the method~~ comprising the step of:

~~producing the cladding tube according to the method of claim 1; and~~

[[using]] installing the cladding tube in a fuel assembly for a nuclear boiling water reactor.

13. (Currently Amended) A cladding tube for nuclear fuel for a nuclear boiling water reactor, which cladding tube comprises:

an outer cylindrical component comprising a first composition mainly containing zirconium and having a first recrystallization temperature, wherein the outer cylindrical component has a first degree of recrystallization higher than 50 percent; and

an inner cylindrical component ~~which~~ comprising a second composition comprising 0.1 to 0.4 percentage by weight Sn, 400 to 1500 ppm Fe, less than 600 ppm O and the rest Zr, except for impurities of a content that does not exceed that which is normally accepted in Zr or Zr-alloys for applications in nuclear reactors, ~~mainly contains zirconium~~ and having a second recrystallization temperature lower than the first recrystallization temperature, wherein the inner cylindrical component has a second degree of recrystallization greater than the first degree of recrystallization and at least 97 percent, wherein the inner cylindrical component ~~which~~ is metallurgically bonded to the outer component, and wherein the first and second compositions materially ~~material compositions of the inner component and the outer component~~ differ from each other ~~and are such that the inner component has a lower re-crystallization temperature than the outer component; wherein~~

~~the inner component has a substantially completely recrystallized structure and the outer component has a structure such that it is partly recrystallized but not to the same extent as the inner component, wherein the degree of recrystallization in the outer component is higher than 50 %.~~

14. (Canceled)

15. (Currently Amended) A cladding tube according to claim 13, wherein the second degree of recrystallization ~~in the inner component~~ is ~~substantially~~ 100% and the first degree of recrystallization ~~in the outer component~~ is between 50% and 96 %.

16. (Currently Amended) A cladding tube according to ~~any of the~~ claim 13, wherein the second composition comprises ~~inner component does not contain more than~~ 1500 ppm Fe or less.

17. (Currently Amended) A cladding tube according to ~~any of the~~ claim 13, wherein the second composition comprises ~~inner component does not contain more than~~ 1000 ppm O or less.

18. (Currently Amended) A cladding tube according to ~~any of the~~ claim 13, wherein the ~~outer component has a~~ first composition ~~substantially comprising~~ comprises Zircaloy 2 or Zircaloy 4.

19. (Canceled)

20. (Canceled)

21. (Previously Presented) A cladding tube according to claim 13, wherein the inner component has a thickness such that it constitutes between 3 % and 30 %of the total thickness of the cladding tube.

22. (Previously Presented) A fuel assembly for a nuclear boiling water reactor, comprising:

an enclosing tube; and

a plurality of cladding tubes according to claim 13 filled with nuclear fuel suitable for such cladding tubes for a boiling water reactor, wherein said plurality of cladding tubes are arranged inside said enclosing tube.

23. (Currently Amended) A method according to claim 1, wherein ~~said final~~ the second ~~annealing is carried out such that the~~ degree of recrystallization ~~in the inner component~~ is at least 97 percent ~~100 %~~ and the first degree of recrystallization ~~in the outer component~~ is between [[50 %]] 70 percent and [[96%]] 90 percent.

24. (Currently Amended) A method according to claim [[1]] 6, wherein the first composition further comprises between 1.2 and 1.7 percent Sn by weight of the first composition ~~outer component has a composition consisting of Zircaloy 2 or Zircaloy 4~~.

25. (Currently Amended) A cladding tube according to claim 13, wherein the second degree of recrystallization ~~in the inner component~~ is 100% and the first degree of recrystallization in the outer component is between [[50%]] 70 percent and [[96 %]] 90 percent.

26. (Currently Amended) A cladding tube according to ~~any of the~~ claim [[13]] 18, wherein the first composition further comprises between 1.2 and 1.7 percent Sn by weight of the first composition ~~outer component has a composition consisting of Zircaloy 2 or Zircaloy 4~~.

Please add the following new claims;

27. (New) The method of claim 1, wherein the step of finally annealing is carried out at a temperature of between 485°C and 515°C.

28. (New) The method of claim 1, wherein the second composition consists essentially of 0.1 to 0.4 percentage by weight Sn, 400 to 1500 ppm Fe, less than 600 ppm O and the rest Zr, except for impurities of a content that does not exceed that which is normally accepted in Zr or Zr-alloys for applications in nuclear reactors.

29. (New) The cladding tube according to claim 13, wherein the second recrystallization temperature is between 485°C and 550°C.

30. (New) The cladding tube according to claim 28, wherein the second recrystallization temperature is between 485°C and 515°C.